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STOCK POISONING DUE TO SCARCITY  
OF FOOD.

BY

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## LETTER OF TRANSMITTAL.

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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF PLANT INDUSTRY,  
OFFICE OF THE CHIEF,  
*Washington, D. C., March 18, 1913.*

SIR: I have the honor to transmit herewith a paper entitled "Stock Poisoning Due to Scarcity of Food," by Dr. C. D. Marsh, which has been submitted by Dr. R. H. True, Physiologist in Charge of Drug-Plant, Poisonous-Plant, Physiological, and Fermentation Investigations, and recommend that this be published as a Farmers' Bulletin.

Respectfully,

Wm. A. TAYLOR,  
*Chief of Bureau.*

Hon. D. F. HOUSTON,  
*Secretary of Agriculture.*

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## STOCK POISONING DUE TO SCARCITY OF FOOD.

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### INTRODUCTION.

It is generally recognized that the heaviest losses of live stock from poisonous plants occur in seasons when feed is short, but the intimate relation between such losses and the food supply does not seem to be appreciated at its full value. If it were understood and acted upon intelligently there would be much less complaint of harm done by poisonous plants.

### POISONING PROBABLE ONLY WHEN FEED IS SCARCE.

Stock seldom eat poisonous plants when good feed is available. This is, in general, true even for the loco weeds, although it is well known that some animals have a loco habit and will eat these weeds in preference to anything else. This habit, however, is usually acquired during a season of short feed, when the loco weeds are the most attractive form of vegetation. If the stock can be prevented from acquiring the habit during this period of scarcity, there will be very few locoed animals.

Larkspur poisoning is most likely to occur either during the season of short feed or on an overgrazed area; in either case the larkspur is the most conspicuous form of vegetation to attract the animals and is eaten in lieu of anything better.

The roots of water hemlock (*Cicuta*) are picked up when there is little else to eat and with disastrous results.

Successive bands of sheep are driven over the same trail until everything suitable for food disappears, and then there follow cases of poisoning from wild cherry. On some trails there is an almost continuous hedge of wild cherry, and the leaves are eaten as high as the sheep can reach. We may assume that in such cases the first to pass over the trail are not poisoned, because there is something else to eat, and the last are not poisoned, because at that time even the poisonous plants have been consumed.

Sheep are sometimes bedded in the same place for several successive days. Under such circumstances everything near the bedding ground is eaten, and if there are any poisonous plants some of the sheep are pretty sure to get them. One of the heavy losses of the

season of 1912 was brought about in this way. For five nights a band was bedded in the same place, with a consequent loss of 200 head. A band in the same neighborhood wandering without a herder suffered no loss.

If sheep are poisoned by milkweeds, and the evidence seems to be fairly conclusive that they are, it is only when there is little else to eat, for sheep do not eat milkweeds under normal conditions.

In the Carolinas, cattle are poisoned by "stagger grass" (*Amianthium muscaetoxicum*) only in the spring. This lily then grows luxuriantly, at a time when there is little or no grass, and the cattle eat it in default of something better.

### CONCLUSIONS.

The plants here referred to have been mentioned only as definite examples of a general truth. Stock seldom eat poisonous plants by choice, but only when induced or compelled by the scarcity of other food. It, perhaps, can not be too strongly impressed upon those using the stock ranges that their losses may be very largely reduced if they will recognize this fact and take a few obvious precautions.

(1) Stock should not be turned out upon the range where there is little to eat except poisonous plants. This is especially dangerous when the stock have been on dry feed.

(2) In a region where certain areas are definitely known to be infested with poisonous plants, stock should be kept away. This is especially necessary when the general range is short, either because grass has not started to grow or because it has been overgrazed. When the range is well covered with good grasses, herding away from poisonous areas is ordinarily unnecessary.

(3) When stock are trailed from one place to another, they should, so far as possible, be driven through a country with plenty of good feed. If it is necessary to drive them through a locality supposed to be infested with poisonous plants, care should be taken to see that the stock are not hungry when going through this region. It is much better to make such a drive in the afternoon rather than in the morning. Special precautions must be taken when it is necessary to pass over a trail that has been used by many others, for all good feed will have disappeared and the stock will eat whatever is left. Sheep should not be bedded for several successive nights in the same place.

